

What is claimed is:

1. A receiver of a spread spectrum communication system comprising:
  - a plurality of despreading circuits for despreading received signals having multipath components at predetermined timing allocated thereto;
  - a rake circuit for performing rake combining of the signals despread by despreading circuits ; and
  - a path searcher which forms a first window showing a part of a search range and calculates delay profile data of said received signals in said first window to search an effective path, forms at least one second window in the search range except said first window and calculates delay profile data of said received signals in said second window, and detects timing at which said received signals are despread based on calculated delay profile data to allocate the detected timing to said despreading circuits.
2. The receiver of the spread spectrum communication system according to claim 1, wherein said path searcher forms a plurality of second windows by dividing the search range except said first window to calculate said delay profile data in said respective second windows in accordance with a predetermined order.
3. The receiver of the spread spectrum communication system according to claim 2, wherein said path searcher is supplied with a peak position information from a peak position estimation circuit which performs rough estimation of a peak position of the delay profile, and said path searcher sets the center of said first window at a timing at which the peak position appears.
4. The receiver of the spread spectrum communication system according to claim 2, wherein said path searcher forms said second windows in only one of areas which interpose said first window therebetween.
5. The receiver of the spread spectrum communication system according to claim 2, wherein said path searcher forms said second windows in both areas which

interpose said first window therebetween.

6. The receiver of the spread spectrum communication system according to claim 2, wherein said path searcher forms two second windows and alternately specifies said second window repeatedly and said path searcher calculate delay profile with the specified second windows.

7. A path search method of a spread spectrum communication system comprising:

receiving signals including multipath components;

forming a first window showing a part of a predetermined search range to search an 5 effective path;

calculating first delay profile data representing a delay profile of received signals, in the first window to search an effective path;

forming at least one second window in the search range except said first window;

calculating second delay profile data representing a delay profile of the received 10 signals in the second window to search an effective path ; and

detecting timing at which despreading said received signals based on calculated first and second delay profile data.

8. The path search method according to claim 7, wherein

said second window forming step includes forming a plurality of second windows by dividing the search range except said first window, and

said second profile data calculating step includes calculating said delay profile data 5 in said respective second windows in accordance with a predetermined order.

9. The path search method according to claim 8, further comprising performing rough estimation of the delay profile of the received signal; and  
setting center of the first window at a timing at which roughly calculated peak position appear.

10. The path search method according to claim 8, wherein said second windows are formed in only one of areas which interpose said first window therebetween.

11. The path search method according to claim 8, wherein said second windows are formed in both areas which interpose said first window therebetween.

12. The path search method according to claim 8, wherein  
said second window forming step forms two second windows, and  
said second profile data calculating step alternately specifies the two second  
windows repeatedly, and calculates the second delay profile data with the specified  
5 second windows.